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ABSTRACT

A work experience component for vocational educator teacher education based on demonstrated competence is proposed. Its basis is research concerning vocational education; sociometric conditions and needs; analyses of the past, present, and future of vocational education; and the current state of the art relative to curriculum systems. This competency-based model utilizes the research effort of Gronneman, including the ten purposes of occupational experience and thirty-two teaching competencies developed through occupational experience. These purposes and competencies are correlated with a list of the ten major factors in the role of the vocational teacher as taken from performance-based teacher education materials developed at The Ohio State University by the National Center for Research in Vocational Education. (This chart is provided.) The competency-based work experience component proposed integrates course work and field application into a unified comprehensive program. Basic programming principles should be used for each phase of the work experience component's development. They are (1) knowledge of specific outcomes, (2) entry assessment, (3) simulations/work situations, (4) progress monitoring, and (5) recycling. (A model/chart is provided to illustrate the overall components of this vocational education competency-based work experience model. Other attachments delineate the undergraduate, graduate, and in-service components highlighting the instructional content needed to make them a viable part of the vocational educational curriculum.) (YLB)

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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DESIGNING AND DEVELOPING A WORK EXPERIENCE COMPONENT FOR A VOCATIONAL EDUCATION CURRICULUM

BY

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INTRODUCTION AND RATIONALE

While research (Brooks, 1971; Ellis, 1968; D'Onofrio, 1976; and Groneman, 1977) does not support the fact that work experience makes one a more effective teacher, a general conclusion seems to be that formal education prepares one to work in an educational setting; and that work experience helps one develop kinds of experiences that complement a teacher's technical training and make for a more effective teacher.

Prosser's theorems strengthen the impact work experience has on the educational setting. Note the following theorems:

1. Vocational Education will be effective in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work.

2. Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools, and the same machines as in the occupation itself.

3. Vocational Education will be effective in proportion as it trains the individual directly and specifically in the thinking habits and the manipulative habits required in the occupation itself.

4. Vocational Education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledges to the operations and processes he undertakes to teach.

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L. O. Andrews in writing on the question of occupational renewal stated:

> Formally lengthly on-the-job experience was thought adequate to produce high occupational competence of some performance. But the growth complexity of technical fields and the rapidity of change are bringing a variety of new problems. In addtion, in many collegiate programs, prospective teachers often have limited vocational acquaintance or competence. Some type of

> supervised field experience in the world of work is an increasingly common part of preservice teacher education in various vocational service areas, and appears equally necessary to maintain competency by inservice teachers.

Finally, the one single statement that leads us to a beginning investigation on how to incorporate work experience into vocational education is this quote by Gillie:

> The accumulation of a predetermined number of years of work experience or attainment of a certain degree does not insure competency in the teaching of an occupational subject or in the administration of an occupational program or college. Yet these elements (academic background and work experience) have become the heart of certification, probably because of the ease with which they can be identified and catalogued.

STANDARD CHARACTERISTICS OF A WORK EXPERIENCE COMPONENT

A work experience component must be based on a firm philosophical and educational foundation. Such a component must conform to the following standard characteristics of vocational education.

1. A viable delivery system.

2. A dependence upon constituency support from students, businesses, teacher training institutions, and the state department.

3. A carefully developed and documented plan that is based upon a set of specific goals and measurable program objectives and which will facilitate and support subsequent planning and programming efforts.

4. The existence of a comprehensive pattern for program development and expansion, supported by legislative and fiscal commitments at the state and local levels, and taking into account occupational needs, student base, and educational resources available or required.

5. A set of program standards addressed to the four factors of curriculum, facilities and equipment, instructional staff, and students.

6. A well defined and operative program of professional personnel development to insure quality state and local leadership and occupationally competent instructional personnel.

7. A mechanism to provide for periodic formative and summative program evaluation.

For a complete description of these characteristics, an examination of the ISD Model developed by the Ohio Department of Vocational Education is suggested.

THREE APPROACHES TO DETAILING A WORK EXPERIENCE COMPONENT

Since our purpose is to design and develop a comprehensive, verified model for a work experience component in the vocational education curriculum, we can analyze three different approaches. The first approach involves listing basic competencies using a review of the literature. This can be shown as a simple chart. This approach is relatively simple but does not help us to clarify how long it takes to accomplish a competency or when they occur in the curriculum.

The second approach adds the dimension of time. Time can be represented in several ways. One is to simply list how long a competency is estimated to last or competencies can be grouped by areas of assigned responsibility and then the time dimension is shown using a calendar-like grid. However, this approach does not provide information on how competencies interrelate.

A third approach requires a PERT network format. According to Brown, this approach permits interrelationships among competencies to be understood through a network. Such a network chart provides a sense of how the parts of a work experience component depend on one another. It also graphically illustrates the sequence in which

elements must be accomplished. The writers recommend the development of such a PERT network in detailing a work experience component.

A WORK EXPERIENCE COMPONENT BASED ON DEMONSTRATED COMPETENCE

The writers propose a work experience component based on demonstrated competence. However, the writers need to emphasize that one of the most serious pitfalls to this approach is the premature mandating of competency based certification before acceptable processes for establishing levels of competency have been developed. The model we propose is based on our research concerning vocational education, sociometric conditions and needs, analyses of the past, present, and future of vocational education and the current state of the art relative to curriculum systems.

Competency based work experience is based on one fact: objectives should direct instruction. Crews, and Dickerson outline three ways that such competency based programs may be structured:

1. To assign certain courses to the program of study, then test the students at the end of the program to determine if they can demonstrate competency attainment.

2. To assign competencies, based upon skills and knowledges needed by the teacher to courses within the program of study.

3. To determine the competencies needed by teachers in today's classroom and then build a program of study that will aid the student in the attainment of these competencies.

The end result of each model is the same: there is a demonstration by the students of their competency prior to certification of work experience.

At this point it is appropriate to discuss the role of the faculty member relative to the use of competency based objectives. This role will change if the faculty member is to become a member of the team that is needed to insure that competencies are systematically attained over a period of time. To sequence the competencies for the student requires considerable time. Such

programs entail a great deal of time in development, operation and refinement. If modules are used, it is very important that adequate support services utiliziang high technology be available to help students meet the required module objectives and to help faculty track the systematic development of competencies.

The competency based model presented in this paper utilizes the research effort of Groneman. Her study centered around two purposes: to determine the purposes of occupational experience for vocational teachers, and second to validate teaching competencies developed through occupational experience for vocational teachers. The following are the ten purposes of occupational experience as determined by Groneman:

1. To provide a general knowledge and understanding of the nature and requirements of specific occupations.

2. To integrate theory learned in school with actual practice on a job.

3. To experience the actual stress, pressures, frustrations, and sense of achievement that are part of every job.

4. To learn about new technologies in business and industry.

5. To develop, improve, apply and/or integrate technical competencies of an occupation.

6. To obtain information about current business standards.

7. To obtain an overall picture of the organization of a business.

8. To formulate realistic concepts of career opportunities.

9. To develop interpersonal skills involving relations with fellow workers, supervisors, and clients.

10. To develop confidence in one's abilities and skills.

In addition, Groneman established that the following teaching competencies were developed through occupational experience:

1. Keep up to date in your occupational specialty

2. Establish criteria for student performance in a vocational education program

3. Coordinate and supervise on-the-job instruction

4. Assist students in applying for employment or further educaion

5. Evaluate students on the job

6. Identify and secure prospective training stations

7 Develop vocational education program goals and objectives

8. Conduct an occupational analysis

9. Develop the training ability of on-the-job instructors

10. Develop a course of study

11. Evaluate your vocational program

12. Establish criteria and guidelines for initiating a cooperative vocational education program

13. Plan and conduct related instruction

14. Keep up to date in your profession

15. Develop training agreements and training plans for placing students on the job

16. Plan and conduct classroom and related activities on educational and career opportunities

17. Develop long-range plans for a vocational program

18. Select and obtain a job in keeping with your professional qualification

19. Organize or reorganize an occupational advisory committee

20. Organize and maintain the vocational laboratory

21. Direct study laboratory experiences

22. Give presentations to school and community groups to promote a vocational education program

23. Write student performance objectives

24. Plan a unit of instruction

25. Maintain an occupational advisory committee

26. Direct the project method

27. Develop a plan for school-community relations

28. Conduct individual and group field trips

29. Prepare teacher-made instructional materials

30. Plan and provide laboratory experiences for prospective teachers

31. Arrange for expanding facilities and for purchasing supplies for the vocational program

32. Provide service to and maintain liaison with members of the community.

Given the above list of the ten major factors in the role of the vocational teacher--taken from the PBTE materials developed at The Ohio State University by the National Center for Research in Vocational Education--the following is a composite of the accepted purposes of occupational experience, the major related factors in the role of the vocational educator and the competencies related to each factor.

Accepted Purposes of Occupational Experience	Major Factors in the Role of Vocational Educator	Teaching Competencies Developed through Occupational Experience
To provide a general knowledge and understanding of the nature and requirements of specific occupations	Guidance	Plan and conduct classroom and related activities on educational and career opportunities Assist students in applying for employment or further education
To integrate theory learned in school with actual practice on a job	Coordination	Coordinate and supervise on-the-job instruction Evaluate students on the job Identify and secure prospective training stations Develop the training ability of on-the-job instructors Establish criteria and guidelines for initiating a cooperative vocational education program Plan and conduct related instruction Develop training agreements and training plans for placing students on the job
To experience the actual stress, pressures, frustrations, and sense of achievement that are part of every job	Coordination	

Accepted Purposes of Occupational Experience	Major Factors in the Role of Vocational Educator	Teaching Competencies Developed through Occupational Experience
To learn about new technologies in business and industry	Program Planning, Development and Evaluation	Develop vocational education program goals and objectives
		Conduct an occupational analysis
		Develop a course of study
		Evaluate your vocational program
		Develop long-rang plans for a vocational program
		Organize or reorganize an occupational advisory committee
		Maintain an occupational advisory committee
	Instructional Planning	Write student performance objectives
		Plan a unit of instruction
		Prepare teacher-made instructional materials
	Instructional Execution	Direct the project method
		Conduct individual and group field trips
		Direct student laboratory experiences

Accepted Purposes of Occupational Experience	Major Factors in the Role of Vocational Educator	Teaching Competencies Developed through Occupational Experience
To develop, imporve, apply and/or integrate technical competencies of an occupation	Coordination	
To obtain information about current business standards	Instructional Evaluation	Establish criteria for student performance in a vocational education program
To obtain an overall picture of the organization	Instructional Planning Instructional Execution	
To formulate realistic concepts of career opportunities	Guidance	
To develop interpersonal skills involving relations with fellow workers, supervisors, and clients	School-Community Relations	Develop a plan for school-community relations Give presentations to school and community groups to promote a vocational education program
To develop confidence in one's abilities and skills	Professional Role and Development	Keep up to date in your profession Keep up to date in your occupational specialty Select and obtain a job in keeping with your professional qualification Plan and provide laboratory experiences for prospective teachers

PROGRAMMING FOR A WORK EXPERIENCE COMPONENT

Our competency-based work experience component integrates both course work and field application into a unified comprehensive program. To accomplish this goal we suggest using basic programming principles for each phase of the work experience component's development. Let us examine each of these programming principles in greater detail.

Specific Outcomes

Each vocational teacher who enters our program is told the outcomes through the use of a competency checklist. This checklist contains cognitive, affective and psychomotor domains.

Entry Assessment

In order to accurately and completely measure a teacher's strengths and weaknesses prior to entry into the work experience component we suggest two assessment activities: a pretest and the use of simulscenes--videotaped sequences of the teacher's performance in selected work situations. These simulscenes can be designed aroud a cluster of competencies.

Simulations/Work Situations

This part of the program utilizes a systematic approach to work experience activities. We suggest using the systems approach to develop our work experience instructional activities and materials. Each of the steps shown below are questions. The answers to these questions are the tangible elements of the process. They create the learning materials. Peckich suggests the following steps:

1. What class are the objectives of the specific module?
2. Who is the learner?
3. What is the specific content?
4. How should the content be organized?

5. What media should be used?

6. Does the material Work?

Simulated instructional activities must correspond to each of the competencies listed in the competency checklist. In every instance, simulation preceeds the actual field experience. However, work situations are the most important aspect of this program. It provides the teacher with the opportunity to use specific skills. Business sites and supervisors who will react favorable to this segment of our training program must be carefully selected.

Progress Monitoring

Using specially trained college supervisors, the vocational teacher's progress via performance is carefully monitored. The effective application of each competency is monitored by: direct observations, self-analysis reports, and practicum activity logs.

Recycling

If the vocational teacher is not showing the required knowledge of the specific competency or the application of the competency in a field situation, the use of independent study modules can be utilized.

The success of the above comprehensive program rests on three premises:

1. The objectives are the ones really needed.

2. The activities should correspond directly to the activities that teachers are expected to perform in current and future jobs.

3. The program evaluation should be based on the vocational teacher's ability to apply the competencies well enough so that the desired outcomes are evidenced.

THE MODEL

The model on the following page illustrates the overall components of our vocational education competency based work experience model. The Undergraduate, graduate, and in-service components are further delineated on the following pages. Each component highlights the instructional content needed to make the competency based work experience component a viable experience in the vocational education curriculum.

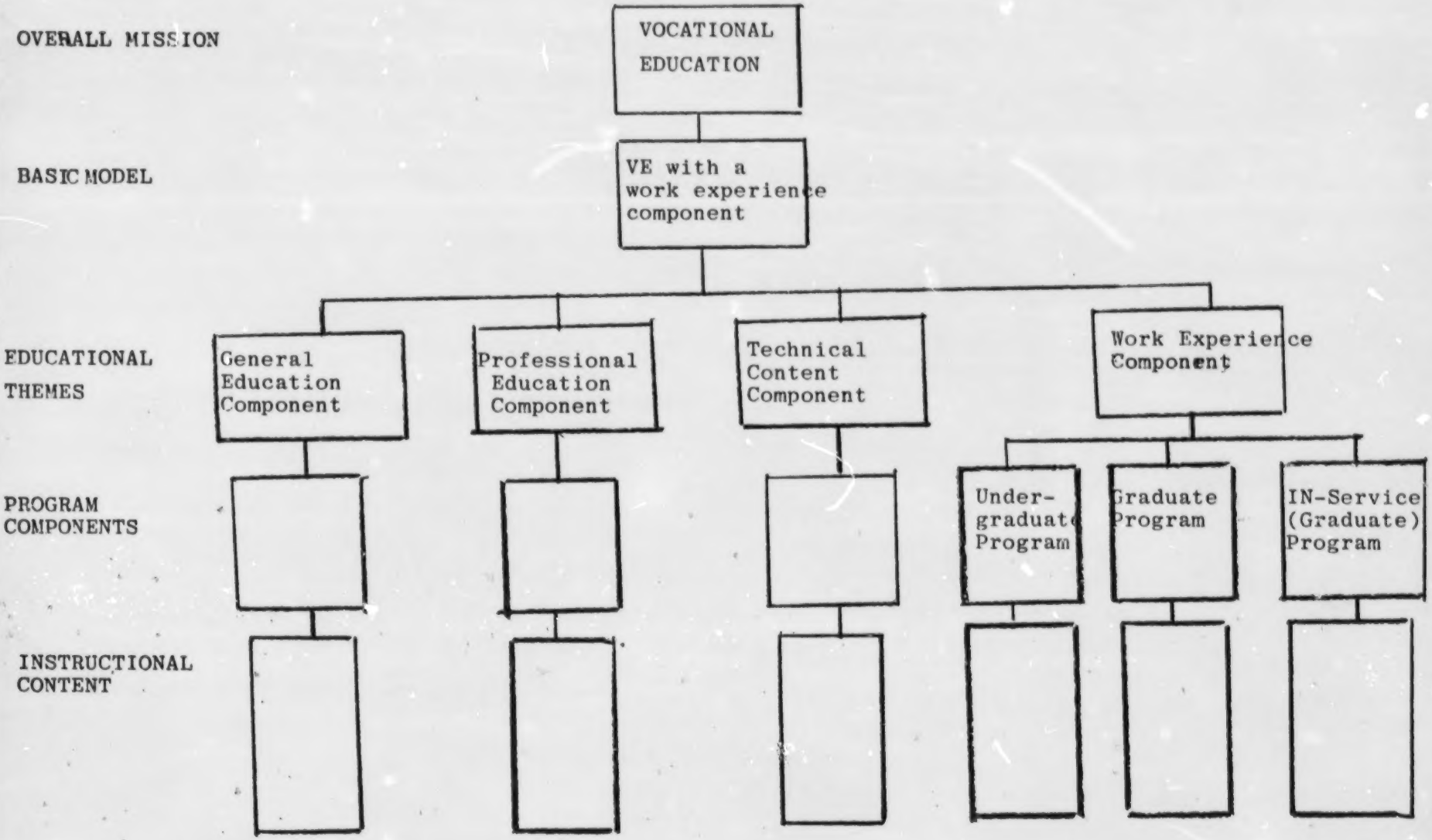
EVALUATION OF A WORK EXPERIENCE COMPONENT

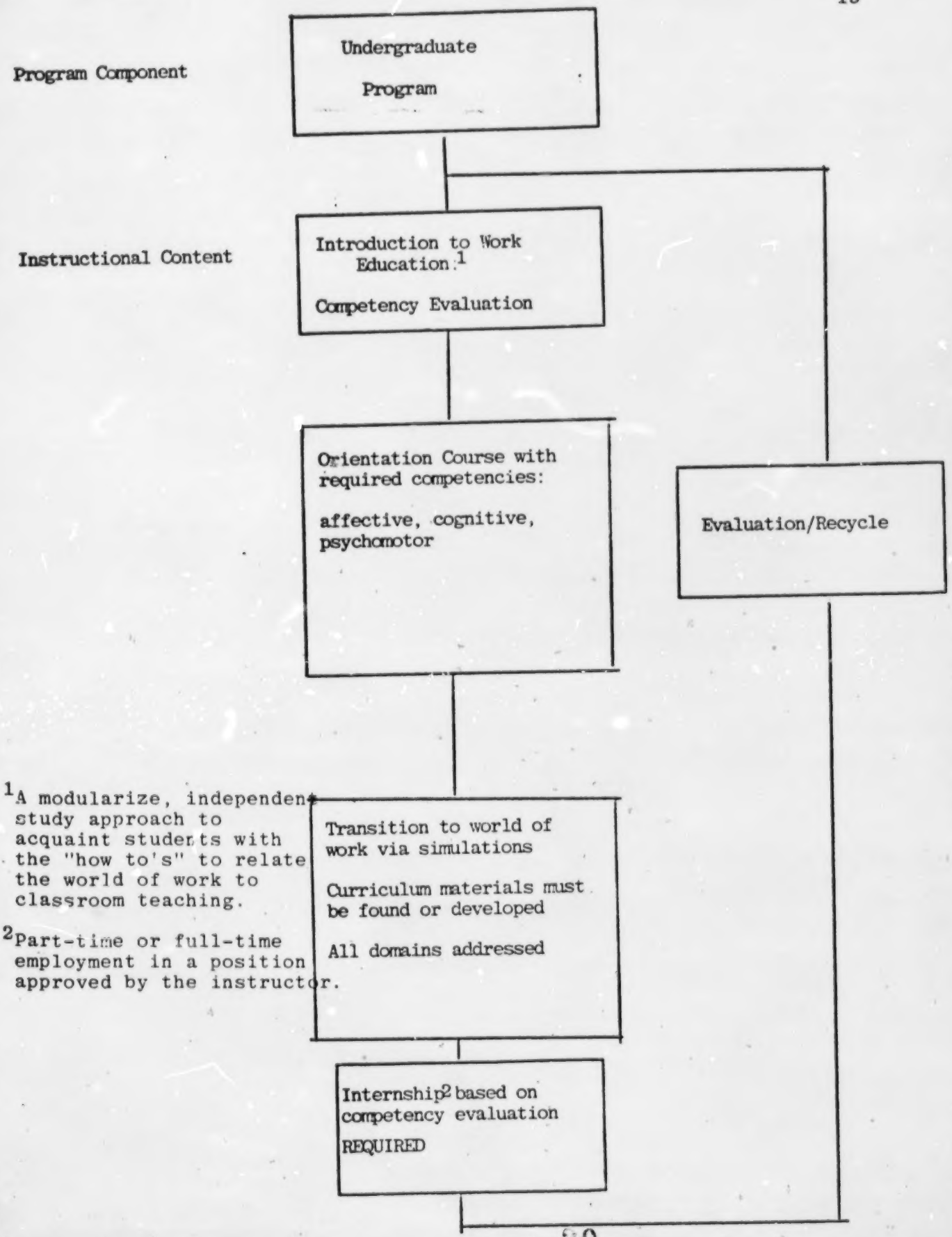
Concerning the evaluation of a work experience componet, we need to answer three questions relative to the effectiveness of the component. These questions are:

1. Are we teaching the right things?
2. Are we teaching them well?
3. Could we teach them better or cheaper?

In the opinion of the writers the evaluation of a work experience component is a most crucial element in the incorporation of a work experience component into a vocational education curriculu. The fuzzyness of the element, however, should not deter us from moving ahead to develop a work experience component.

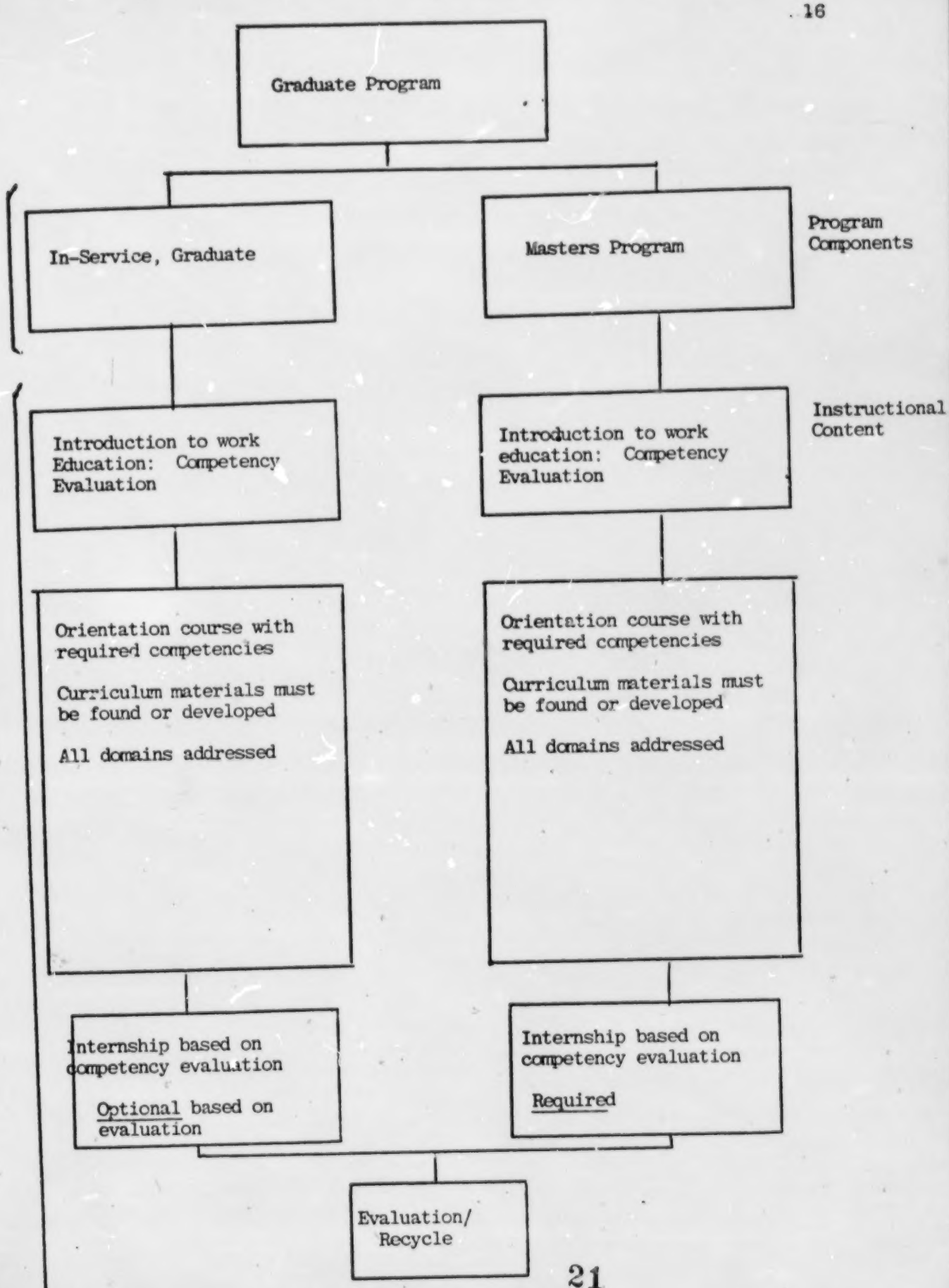
VOCATIONAL EDUCATION COMPETENCY BASED WORK EXPERIENCE MODEL





[1]A modularize, independent study approach to acquaint students with the "how to's" to relate the world of work to classroom teaching.

[2]Part-time or full-time employment in a position approved by the instructor.


Graduate Program
In-Service, Graduate
Masters Program
Program Components
Introduction to work Education: Competency Evaluation
Introduction to work education: Competency Evaluation
Instructional Content
Orientation course with required competencies
Curriculum materials must be found or developed
All domains addressed
Orientation course with required competencies
Curriculum materials must be found or developed
All domains addressed
Internship based on competency evaluation
Optional based on evaluation
Internship based on competency evaluation
Required
Evaluation/ Recycle

Bibliography

Alden, Jay. "Measuring Training Effectiveness at Xerox." Improving Human Performance Quarterly, Vol. 5, 1976.

Andrews, L.O. "Student Teaching as a Springboard for InService Education," Theory into Practice, No. 1, Feb. 1975.

Beasley, Gary and James Smiley. Occupational Experience for Vocational Education Teachers: A Handbook for Teacher Educators. Columbus: Ohio State University, 1971.

Brooks, Lloyd Demar. "The Relationship Between Work Experience and Teaching Effectiveness of Vocational Office Education Teachers." Unpublished Doctor's Dissertation, University of Tennessee, 1971.

Cotrell, Calvin J., et al. Modern Curricula for Vocational and Technical Teacher Education: Report No.1 Performance Requirements for Teachers, Final Report. Columbus: Ohio State University, 1971.

Crawford, Lucy C. A Competency Pattern Approach to Curriculum Construction on Distributive Teacher Education. Blacksburg: Virginia Polytechnic Institute, 1967.

Crews, James, and Z.S. Dickerson, Ed. Curriculum Development in Education for Business. NBEA Yearbook, 1977.

Croom, Walter McDonough. "A Study of the Competencies of Occupational Teachers Employed in the Public School of North Carolina." Unpublished Doctor's dissertation, North Carolina State University, 1972.

Gille, Angelo C., Sr. Principles of Post Secondary Vocational Education. Columbus, Charles E. Merrill Publishing Co., 1973.

Groneman, Nancy Jean. Purposes of and Teaching Competencies Developed Through Occupational Experience for Business and Office Education Teachers, Ed.D., University of Nebraska, 1976.

Hammond, James J. "Response," Vocational Education: Social and Behavioral Perspectives, eds. Carl J. Schaefer and Jacob J. Kaufman. Lexington: Heath Lexington Books, 1971.

Instructional Materials Laboratory, An Instructional System Design for Vocational Education. The Ohio State University, 1976.

Kazanes, H.C. and L.D. Kieft, An Experimental Project to Determine More Effective Vocational Teacher Certification Procedures in Michigan by Competency Examinations. Ypsilanti: University Press, 1966.

Kerr, Mary, and Robert Gable, "Field-Based Programming in Teacher Education," NSPI Journal, Vol. XVI, June, 1977.

Moss, Jerome, Jr. "Assumptions Underlying Preservice Programs for Beginning Level Vocational Teachers," Changing the Role of Vocational Teacher Education, eds. Rupert N. Evans and David Terry. Bloomington: Mc Knight and McKnight Publ. Co., 1971.

Musgrove, William Robert. "Relationship of Occupational Experience, Teaching Experience, Technical Training and College Training to Rated Teaching Effectiveness of Vocational Electronics Teachers." Unpublished Doctor's dissertation, Univ. of Missouri, 1968.

National Advisory Council on Education Professions Development. Vocational Education: Staff Development Priorities for the 70's-- A Report. Washington, D.C.: U.S. Gov. Printing Office, 1973.

Peckich, John. "Try this Simple 'Systems Approach' to Determining Training Needs and Methods," Training, Sept. 1977.

Roeder, John A. "An Analysis of Cooperative Vocational Technical Teacher Education Curriculum and Programs." Unpublished Doctor's dissertation, State University of New York, 1972.

Rosner, Benjamin (Chr.). The Power of Competency-Based Teacher Education: Report of the Committee on National Program Priorities in Teacher Education. Boston: Allyn and Bacon, Inc., 1972.

Stowitschek, Joseph J. "Field-Responsive Teacher Training," NSPI Journal, June, 1977.

Stowitschek, Joseph J. and Carole Stowitschek. "Field-Responsive ID and CBTE," NSPI Journal, June, 1977.

Thoreson, Jubert N. "An Analysis of Current and Recommended Occupational Experience Requirements for Certification of Vocational Business and Office Education Teacher-Coordinators in the United States.: Unpublished Doctor's dissertation, Univ. of North Dakota, 1972.

Vogler, Daniel. "Acquiring and Maintaining Competencies Through Teacher Education Curricula," Competencies for Teachers: Vocational Education Shows the Way, eds. David Terry and others. Urbana: Illinois University, June, 1972.

Wiggins, Lloyd L. and Ben Carmichael. "Work Experience for the Professional Development of Vocational Teachers." Advocacy on Issues. St. Paul: University of Minnesota, 1974.